## JC17 Rec'd PCT/PTO 0 7 JUN 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

- 1. (Original) Liquid-crystalline medium having a helically twisted structure comprising a nematic component and an optically active component, characterised in that the optically active component comprises one or more chiral compounds whose helical twisting power and concentration are selected in such a way that the helical pitch of the medium is  $\leq 1 \mu m$ , and the nematic component comprises one or more compounds containing a 3,4,5-trifluorophenyl group.
- 2. (Original) Liquid-crystalline medium having a helically twisted structure comprising a nematic component and an optically active component, characterised in that the optically active component comprises one or more chiral compounds whose helical twisting power and concentration are selected in such a way that the helical pitch of the medium is  $\leq 1 \mu m$ , and the nematic component comprises one or more compounds of the formula I

$$R^{0} - \left[ \begin{array}{c} A^{2} \\ A^{2} \end{array} - Z^{2} \right]_{a} A^{1} - Z^{1} - \left[ \begin{array}{c} Y^{1} \\ O \\ Y^{2} \end{array} \right]$$

in which

 $R^0$ 

denotes H or an alkyl or alkenyl radical having 1 to 20 C atoms which is unsubstituted, monosubstituted by CN or CF<sub>3</sub> or at least monosubstituted by halogen, where, in addition, one or more CH<sub>2</sub> groups in these radicals may each, independently of one another, be replaced by -O-, -S-, -CO-, -CO-O-, -O-CO-, -O-CO-O-, -CH=CH- or -C≡C- in such a way that O atoms are not linked directly to one another,

$$-\sqrt{A^1}$$
 and  $-\sqrt{A^2}$  each, independently of one another, denote

$$-$$
 or  $\bigcirc$   $\bigvee_{Y^4}$ 

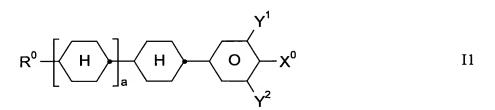
Y<sup>1</sup> to Y<sup>4</sup> each, independently of one another, denote H or F,

Z<sup>1</sup> and Z<sup>2</sup> each, independently of one another, denote -O-, -S-, -CO-, -COO-, -OCO-, -S-CO-, -CO-S-, -OCH<sub>2</sub>-, -CH<sub>2</sub>O-, -SCH<sub>2</sub>-, -CH<sub>2</sub>S-, -CF<sub>2</sub>O-, -OCF<sub>2</sub>-, -CF<sub>2</sub>S-, -SCF<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-, -CF<sub>2</sub>CH<sub>2</sub>-, -CH<sub>2</sub>CF<sub>2</sub>-, -CH=CH-, -CF=CH-, -CH=CF-, -CF=CF-, -C=C- or a single bond,

X<sup>0</sup> denotes F, Cl, halogenated alkyl, alkenyl or alkoxy having 1 to 6 C atoms, and

a denotes 0 or 1.

3. (Original) Medium according to Claim 2, characterised in that it comprises one or more compounds selected from the following formulae



$$R^{0} \xrightarrow{H} Z^{3} \xrightarrow{O} X^{0}$$
I2

in which R<sup>0</sup>, X<sup>0</sup>, Y<sup>1</sup>, Y<sup>2</sup>, Y<sup>3</sup>, Y<sup>4</sup> and a have the meaning indicated in Claim 2,

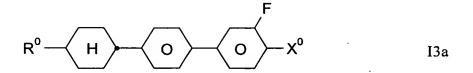
- R<sup>0</sup> preferably denotes n-alkyl, alkoxy, fluoroalkyl, alkenyl or oxaalkenyl, each having up to 9 C atoms,
- Z<sup>3</sup> in each case, independently of one another, denotes COO, C<sub>2</sub>H<sub>4</sub>, CF<sub>2</sub>O or C<sub>2</sub>F<sub>4</sub>, and
- Z<sup>4</sup> in each case, independently of one another, denotes COO, CF<sub>2</sub>O, C<sub>2</sub>F<sub>4</sub> or a single bond.
- 4. (Currently Amended) Medium according to Claim 2 or 3, characterised in that it comprises one or more compounds selected from the following formulae

$$R^0 \longrightarrow H \longrightarrow O \longrightarrow X^0$$
 Ila

$$R^0$$
  $H$   $H$   $O$   $F$   $I1b$ 

$$R^0$$
  $H$   $H$   $COO$   $O$   $F$   $I2a$ 

$$R^0$$
  $H$   $C_2H_4$   $O$   $X^0$   $I2k$ 



$$R^0 \longrightarrow H \longrightarrow O \longrightarrow K^0$$
 I3b

$$R^0 \longrightarrow H \longrightarrow O \longrightarrow F$$
  $I3c$ 

in which  $R^0$  and  $X^0$  have the meaning indicated in Claim 2, and  $X^0$  in the formula I1a preferably denotes OCF<sub>3</sub> and in the formulae I1b, I2a, I2k, I3a, I3b and I3c preferably denotes F.

(Currently Amended) Medium according to at least one of Claims 2 to 4 Claim
 characterised in that it comprises one or more compounds of the following formula

$$R^0$$
  $H$   $O$   $Y^3$   $Y^1$   $Y^0$   $II$ 

in which  $R^0$ ,  $X^0$ ,  $Y^1$ ,  $Y^2$ ,  $Y^3$  and  $Y^4$  have the meaning indicated in Claim 2.

- 6. (Currently Amended) Medium according to at least one of Claims 2 to 5 Claim 2, characterised in that it comprises more than 50% of one or more compounds containing a 3,4,5-trifluorophenyl group.
- 7. (Currently Amended) Medium according to at least one of Claims 2 to 6 Claim

- 2, characterised in that the nematic component comprises
- 5 to 50% of compounds of the formula I1,
- 5 to 45% of compounds of the formula I2,
- 10 to 65% of compounds of the formula I3,
- 3 to 40% of compounds of the formula II.
- 8. (Currently Amended) Medium according to at least one of Claims 1 to 7 Claim 1, characterised in that it has a reflection wavelength in the range from 400 to 800 nm.
- 9. (Currently Amended) Medium according to at least one of Claims 1 to 8 Claim 1, characterised in that it comprises one or more dyes.
- 10. (Currently Amended) Use of a medium according to at least one of Claims 1 to
   9 Claim 1 for electro-optical, laser-optical or nonlinear-optical purposes.
- 11. (Currently Amended) Electro-optical liquid-crystal display containing a medium according to at least one of Claims 1 to 9 Claim 1.
- 12. (Original) Electro-optical liquid-crystal display according to Claim 11, characterised in that it is a cholesteric, SSCT, PSCT or flexoelectric display.
- 13. (Currently Amended) Electro-optical liquid-crystal display according to Claim 11 or 12, characterised in that it is an active-matrix display.
- 14. (Currently Amended) Active laser material or resonator for laser applications, containing a CLC medium according to at least one of Claims 1 to 9 Claim 1.
- 15. (Currently Amended) Laser arrangement containing a medium according to at least one of Claims 1 to 9 Claim 1 or an active laser material or a resonator according to Claim 14 therefor.